

WHAT IS CLAIMED IS:

1. A net-shape molded heat transfer part, comprising:
a core of thermally conductive material having an outer surface; and
a metallic coating disposed on said outer surface of said core.
2. The net-shape molded heat transfer part of Claim 1, wherein said thermally conductive core is a polymer composite material.
3. The net-shape molded heat transfer part of Claim 2, wherein said polymer composite includes a base matrix and a conductive filler loaded therein.
4. The net-shape molded heat transfer part of Claim 3, wherein said conductive filler is copper flakes.
5. The net-shape molded heat transfer part of Claim 3, wherein said conductive filler is carbon fiber.
6. The net-shape molded heat transfer part of Claim 1, wherein said metallic coating is an electromagnetic interference reflective coating.
7. The net-shape molded heat transfer part of Claim 1, wherein said metallic coating is a radio frequency wave reflective coating.
8. The net-shape molded heat transfer part of Claim 1, wherein said metallic coating is a copper-nickel coating.
9. A method of forming a thermally conductive part, comprising the steps of:
molding a part of a thermally conductive composite material into a net-shape molded configuration; and
applying a metallic coating over said part.

10. The method of Claim 9, further comprising the step of:
providing an electromagnetic interference reflective layer about said part.
11. A net-shape moldable heat transfer part, comprising:
A core of thermally conductive polymer composite including a base matrix of polymer material loaded with thermally conductive filler; and
A metallic coating on said core; said core being sealed from moisture and sealed from electromagnetic interference and radio frequency waves.
a metallic coating to substantially seal the polymer core against moisture infiltration.